

MassDEP Delivers Oil Spill Response Equipment to Cape Communities

Barnstable Is First of 19 Coastal Towns to Get Fully Stocked Trailers

MassDEP Acting Commissioner Arleen O'Donnell, joined by members of the Cape Cod legislative delegation, presented the first of 19 oil spill emergency response trailers to the Town of Barnstable in June, saying it was important to be prepared for a massive oil spill, but adding that spill prevention efforts will hopefully mean that the new equipment would never need to be used.

The keys to the emergency response trailer and its oil spill emergency equipment were presented to Town Manager John Klimm in a ceremony held in Aselton Park on Hyannis Harbor. Trailers for 18 other communities on Cape Cod and the Islands are being delivered this month and next.

Also taking part in the presentation ceremony were Senator Robert O'Leary, Representative Matthew Patrick, Joshua Mant, director of Local Affairs for Senate President Therese Murray, Barnstable Town Council President Janet Joakim, and Hyannis Deputy Fire Chief Dean Melanson.

"Each community will receive a trailer stocked with emergency equipment that is essential in mitigating an oil spill's impact during the spill's first few hours," Commissioner O'Donnell said at the ceremony. "The trailers will be placed at strategic locations in each coastal community, putting essential tools in the hands of first-responders. The state will maintain, service and replenish the trailers to ensure rapid response when needed."

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A History of Oil Spills on the Cape and Islands

A trust fund set up as part of the Oil Spill Act of 2004 is being used to purchase and stock the emergency response trailers. The Act was passed following the devastating spill of 98,000 gallons of oil into Buzzards Bay in April 2003.

Commissioner O'Donnell called that spill from a Bouchard Transportation barge devastating, as 84 miles of coastline were spoiled, 178,000 acres of shell-fishing beds were closed for months, and hundreds of sea birds were oiled and killed.

The Commissioner added that the Bouchard spill was not the only one to impact Cape Cod and the Islands over the years. The barge Florida dumped 190,000 gallons of oil into Buzzards Bay off Falmouth in 1969, while the Argo Merchant spilled 7.7 million gallons of oil south of Nantucket in 1976.

Due in part to the devastating spills over the years, MassDEP is taking a two-pronged approach: spill prevention and spill response. O'Donnell said that the Oil Spill Act requirements, such as tug escorts and double-hulled vessels, will help to prevent future spills once implemented, but the emergency response trailers and training exercises will help keep local first-responders ready to tackle spills major and minor, just in case.

“The Town of Barnstable is pleased to be receiving assistance from the state, and to be one of the recipients of the Oil Spill Emergency Response trailers,” Town Manager Klimm said. “This equipment will now enable the town to respond effectively and efficiently, in case of an oil spill emergency.”

Joining Barnstable in receiving a trailer are Aquinnah, Brewster, Chatham, Chilmark, Dennis, Eastham, Edgartown, Harwich, Mashpee, Nantucket, Oak Bluffs, Orleans, Provincetown, Tisbury, Truro, Wellfleet, West Tisbury and Yarmouth.

Trailers and Training to Prepare First-Responders

Each trailer is 20 feet long by eight feet wide and contains thousands of feet of boom materials, floats and anchors, absorbent pads, storm drain plugs, life vests and personal protective gear. The communities will also be provided with oil spill first-responder training as part of this program. The total cost of the trailers and the training component is approximately \$700,000.

The Oil Spill Act funding for the trailers comes from the trust fund, set up to receive two cents for every barrel of petroleum shipped into Massachusetts since September 2004. The trust fund can be used to improve and enhance marine oil spill response and prevention, provide emergency loans and pay damage claims. The fund now totals more than \$3 million.

The trust fund is also being used to help communities draft Geographic Response Plans (GRPs). A GRP is a planning document that is intended to guide local responders in the first 24 to 48 hours of a major coastal oil spill until additional resources can be supplied through the United Command structure. The GRP includes maps and aerial photographs that depict road access, topography, sensitive habitats, and recommended locations for deployment of oil containment boom to protect sensitive habitats.

Emergency response trailers were previously delivered to all of the communities on Buzzards Bay, including Bourne, Falmouth and Sandwich. MassDEP will be working with its Oil Spill Advisory Committee on plans to continue to deliver response trailers and training to all coastal communities over the next two to three years.

Massachusetts Leading the Way in Landfill Gas-To-Energy Generation

Methane Capture Systems Produce Electricity That Is Sold To The Grid

Many of the state's municipal solid waste landfills - whether active or capped - generate significant amounts of leachate and methane. Containing leachate and preventing methane from reaching explosive levels, or escaping to the atmosphere, have long been essential components for any closure and monitoring plan at landfills.

Recently, however, a greater emphasis has been placed on installing systems that do more, specifically with the methane gas. Landfill operators and regulators have increasingly looked at Landfill Gas-To-Energy (LFGTE) as a means of capturing and converting potentially harmful methane into energy or electricity.

This innovative idea has the regulatory support of MassDEP and the state Division of Energy Resources (DOER). Currently, there are 15 landfill sites across the state producing approximately 50.6 megawatts (MW) of power, with another four sites under construction and two existing sites lining up to possibly expand in the future (another 9.3 MW of power). A megawatt is enough energy to power about 1,200 New England homes.

Many of the existing LFGTE systems were installed after 1996 when MassDEP adopted guidance specifically for such systems, establishing a level playing field regarding the level of emissions these systems were expected to meet.

Most recently, (June 2007) Quarry Energy Corporation of Quincy received approval to move ahead with a LFGTE system that, once operational, is expected to produce 0.6 MW (or 600 kilowatts) of electric power to the grid.

Historically, LFGTE systems were used only in limited numbers, chiefly because of simple economics, i.e., did the cost of installing, operating and maintaining the landfill gas capture system balance against the income received from tax credits and sale of energy/electricity that would be generated?

Another issue was the concern about the odor-causing contaminants in landfill gas. But it was found that those issues could be minimized with adequate air quality controls, along with sufficient setbacks and compliance testing on actual emissions and noise levels.

Landfill Gas Systems Diversify Energy Supply

Two other key factors are also serving to bring about the development of additional LFGTE systems. Chief among these is the need to diversify the state's energy supply. Massachusetts is not alone in looking to get a larger percentage of energy from renewable fuels, and that includes biomass (agricultural and organic sources) and other new renewable fuels. Under the state's DOER regulations, landfill gas is considered eligible as a new renewable fuel.

Closely following that is the issue of global warming and the focus on reducing methane emissions. Methane is 23 times more potent a greenhouse gas than carbon dioxide. The federal Environmental Protection Agency (EPA) states that nationwide (2004) municipal solid waste landfills were the largest source of human-related methane emissions (25%).

Of course, any landfill will generate methane only until its biomass has decayed. So, the amount of energy that can be generated is relatively short-term and subject to site conditions, but so long as the methane is present, LFGTE proponents say it makes sense, as the old adage goes: when life gives you lemons, you make lemonade.

In Massachusetts, the number of LFGTE systems operating - and the amount of energy they produce - fluctuate due to site conditions. Currently, the state's largest active landfill, located in Fall River, has in place two separate systems that generate 2.1 and 5.2 MW of power respectively. Not all these systems work out: one system in Braintree and another in Amesbury were installed, but ultimately de-commissioned and currently remain off-line. Some cities, like Westfield, have systems that generate as little as 0.4 MW.

Others have proved more successful. In Chicopee, one of its landfills has a total of three systems in place, each has a capacity of 1.9 MW, while a second Chicopee landfill is permitted at 1.8 MW.

Nationwide, the EPA reported (in December 2006) approximately 425 LFGTE projects, generating approximately 10 billion kilowatt-hours of electricity per year and delivering 230 million cubic feet per day of landfill gas to direct-use applications. The EPA also estimates that approximately 560 additional landfills present attractive opportunities for project development.

Currently, Massachusetts has a number of LFGTE projects in the development or planning stage, including: Fitchburg/Westminster, which in May 2007 brought on line the first two of five engines. Over the next eight years the Fitchburg/Westminster location will grow to eventually produce a total of 7.2 MW. Also, Granby, which already has in place a 2.8 MW system and a 0.1 MW system, is looking to add a third at 0.4 MW. Southbridge Recycling Park has a system that is expected to be in place by the end of the year and producing 1.6 MW.

Finally, Northampton (0.8 MW) and Haverhill (1.6 MW) are under construction with what would be their first gas-to-energy systems.

'Safe Neighborhoods Chemical Initiative' Puts Spotlight On Manufacturers Using Chemicals, Producing Hazardous Wastes

MassDEP, Fire Services Team Up to Conduct Pilot Program Inspections

Inspection teams from MassDEP and the Department of Fire Services (DFS) continue to conduct joint chemical facility evaluations as part of the new "Safe Neighborhoods Chemical Initiative," focusing on approximately 45 plants across the state that are located near residential areas.

This special pilot program was developed to proactively determine the potential for serious environmental and public safety incidents and take appropriate action to identify and address hazardous conditions that pose a risk to the community.

The initiative seeks to prevent incidents like the massive explosion at a manufacturing plant in Danversport just before Thanksgiving 2006, as well as the serious leak of sulfuric acid vapors from a manufacturing facility in South Hadley in October 2006.

"Both Danversport and South Hadley experienced catastrophic impacts from incidents that happened at small- to medium-sized industrial facilities," MassDEP Acting Commissioner Arleen O'Donnell said at the initiative's kickoff. "While we can't promise to find every potential threat, this joint inspection program will ensure that we have made the effort to work with companies to discover and abate imminent hazards that threaten public safety, the health of our communities, and the environment."

"The Department of Fire Services is pleased to be partnering with MassDEP on this important pilot project," Fire Marshal Stephen D. Coan said. "The information it will generate is key to protecting our communities, our firefighters and the environment from the types of major incidents we have recently experienced."

A Cooperative Effort in Inspecting Plants

In the past, the storage and handling of chemicals and the handling and disposal of hazardous waste were inspected separately. Now, under this initiative, state inspectors and local fire investigators are reviewing the entire operation - both storage and waste - to get a complete view of the operations at each facility. Traditionally, the authority to inspect raw materials and many virgin chemicals did not rest with state officials. This pilot program utilizes state law, Statute 21E, in a very broad manner to review these critical areas of concern.

The inspection teams, consisting of compliance officers and engineers from MassDEP and Fire Services inspectors, are working with the local fire departments to examine storage and handling practices at each site, with an eye to preventing another Danversport or South Hadley from happening again. Imminent hazards found during these inspections will be dealt with swiftly to protect the public and workers at those sites.

The facilities now being targeted for inspection show the following characteristics:

- Potential for accident causing injury, death or destruction;
- Flammable liquids or gas, reactive and water-reactive chemicals, poisonous gases and liquids, explosives, or other highly hazardous materials present on-site; and
- Densely populated areas located nearby.

Inspections of the first round of facilities should be completed this fall. Results will be evaluated to determine future strategies that can be used by state and local officials to improve the safety of operations at all small- and medium-sized facilities.

For MassDEP, this pilot program is part of a first-in-the-nation initiative to inspect the hazardous waste storage and handling procedures of more small- and medium-sized manufacturing plants across the state. Based on past experience, MassDEP has found higher levels of regulatory noncompliance at small facilities (13 percent noncompliance rates) than at larger facilities (9 percent). There are approximately 15,000 Small Quantity and Very Small Quantity Generators of hazardous waste in the state. MassDEP typically inspects roughly 200 each year.

There are 485 Large Quantity Generators in Massachusetts, and MassDEP is required by the federal Environmental Protection Agency (EPA) to inspect 20 percent of them each year. Under this new arrangement, EPA has given MassDEP flexibility to reduce its inspections of Large Quantity Generators and increase its inspections of Small Quantity Generators, which seem to pose a greater risk.

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COURT BACKS IPSWICH RIVER PROTECTION EFFORTS: A Suffolk Superior Court ruling has backed MassDEP efforts to protect natural resources in the Ipswich River Basin by affirming a water withdrawal permit issued to the Town of Topsfield. The decision affirmed MassDEP's issuance of the Water Management Act (WMA) permit to the town, which required that a water bank be established to mitigate the impacts of increasing withdrawal demands from the Ipswich River and that water use restrictions be imposed on unregulated private irrigation wells. Topsfield had appealed a magistrate's decision to support the original WMA permit requirements. The Ipswich River is one of the most stressed river basins in the Commonwealth. The WMA permits require major water conservation efforts when the river drops to specified levels. Mandatory outside water restrictions are required in permitted communities in the upper portion of the Ipswich River Basin when the river drops to 18.7 cubic feet per second for three consecutive days. For more information on this case, go to:

<http://www.mass.gov/dep/public/press/0607tops.htm>

EBC PRESENTS AWARD TO MassDEP FOR DEVENS WORK: MassDEP joined three other organizations in receiving this year's Nicholas Humber Environmental Award for Outstanding Collaboration, sponsored by the Environmental Business Council of New England (EBC), for work to permit a new manufacturing facility at the former Ft. Devens. EBC presented the award to MassDEP, the Devens Enterprise Commission, Bristol-Myers Squibb, and MassDevelopment during EBC's Annual Dinner and Awards Ceremony in Waltham. Each organization was selected for this honor to "acknowledge your leadership in the redevelopment of the former Ft. Devens U.S. Army base with the siting and permitting of the Bristol-Myers Squibb large-scale biologics manufacturing facility." According to EBC, the award recognizes "environmentally related collaboration, which reflects the global environmental values and human spirit exemplified by Nicholas Humber." Acting Commissioner Arleen O'Donnell and Central Regional Office Director Martin Suuberg represented MassDEP at the ceremony.

TMDL PLAN TRIES TO GET THE MERCURY OUT: Massachusetts has joined the other New England states and New York state in drafting a plan for reducing mercury in regional waters to eliminate fish consumption advisories. It is the first regional mercury reduction plan proposed in the United States. The states collaborated with the New England Interstate Water Pollution Control Commission to produce the report, entitled Northeast Regional Mercury Total Maximum Daily Load. This action underscores the determination of the states to resolve the problem and to address the main issue - mercury deposited in the Northeast from sources outside the region. It calls on the federal government to do more to reduce mercury emissions that impact water bodies in the Northeast. The draft plan acknowledges that the Northeast states have been successful in achieving huge reductions in almost all in-state sources of mercury. Nearly a decade of work has resulted in mercury reductions of more than 70 percent in Massachusetts. But in-state progress has not been enough to eliminate fish advisories. The majority of mercury in states' waters comes from out-of-state sources, such as coal-fired power plants. That has resulted in elevated levels of mercury in certain fish species, and required fish consumption advisories for more than 10,000 lakes, ponds and reservoirs and over 46,000 river miles in the region. A TMDL (Total Maximum Daily Load) is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards. The TMDL draft plan stipulates that a reduction of between 86 and 98 percent from the 1998 baseline deposition data of mercury arriving in the region from out-of-state sources must be achieved to make many of the region's freshwater fish safe to eat. The TMDL plan and supporting documents can be viewed at:

<http://www.mass.gov/dep/water/resources/tmdls.htm>

CLEAN DIESEL TEAM EARNS EPA AWARD: The U.S. EPA marked Earth Day 2007 by honoring a number of environmental leaders at the Environmental Merit Awards ceremony at Faneuil Hall in Boston. Among those honored was the Massachusetts Clean Diesel Team, consisting of staffers from MassDEP and the Executive Office of Energy and Environmental Affairs. Massachusetts has made a commitment to reduce pollution from diesel engines, in part to address statewide lifetime asthma rates of more than 14 percent. Among the efforts to reduce diesel pollution and educate the public are: the development of a school bus driver anti-idling video; adoption of bid specifications requiring the use of advanced pollution control technology in all MassHighway construction projects; retrofitting approximately 25 pieces of paving equipment statewide; and encouraging the development of Truck Stop Electrification sites across the state. Additionally, on December 13, 2006, MassDEP executed a consent order with the Executive Office of Transportation (EOT) for failing to meet deadlines associated with construction of Phase III of the Silver Line. As a condition of the settlement, EOT agreed to allocate \$22.5 million to retrofit every school and regional transit diesel bus in the state by 2010.

BAY STATE JOINS REGISTRY TO TRACK GHG EMISSIONS: Massachusetts has joined 31 states, one Native American tribe and two Canadian provinces as founding members of The Climate Registry, the largest multi-state effort to track the emissions associated with global warming. This effort will assist in measuring, tracking and verifying emissions of greenhouse gases, the gases that cause climate change. It will also provide the measurement and reporting infrastructure to support voluntary, mandatory, market-based and emissions reduction programs that are consistent across borders and industry sectors. The Registry will accept reporting data starting in January 2008. For more details on this effort, go to:

http://www.mass.gov/envir/press/pressreleases/051007_climate_registry.pdf

BIKE WEEK CHALLENGE VICTORY: For the third year in a row, MassDEP has won the Bike Week Commuter Challenge with a total of 74 staffers taking part in the Boston and regional offices. The Challenge promotes bike riding and healthy modes of transportation that help to reduce air pollution and carbon emissions. Staffers interested in bicycle commuting and its benefits can check out the MassDEP Intranet site. It has a list of MassDEP "Bike Buddies," fellow bicycle commuters from various parts of the Metro-Boston area, who have volunteered to help you plan your ride. For more information about the wide range of biking activities and bicycle transportation initiatives in Massachusetts, visit: <http://www.massbike.org>

MOUTH OF COASTAL RIVER MAPS POSTED ON WEB: The MassDEP web site now provides a mapping feature that will assist municipal officials, conservation commissions, and residents with information that will make planning easier under the Wetlands Protection Act (WPA). The site publishes the Massachusetts "Mouth of Coastal River" maps. These maps identify the Mouth of the River (MOR) for coastal rivers in order to provide a clean, consistent, and predictable means of locating all river mouths in the Commonwealth. The MOR lines represent the limit of Riverfront Area jurisdiction under the WPA. Land upstream of the MOR line includes Riverfront Areas subject to the protections afforded by the wetlands regulations; any land seaward of the MOR line is not subject to jurisdiction as a Riverfront Area. These maps should reduce the need for individual MOR delineations and provide a predictable means for project review for landowners, conservation commissions, and MassDEP. The maps only apply to coastal communities on the North and Shore Shores. For more details, go to: <http://www.mass.gov/dep/water/resources/maps/mor/mormaps.htm>

ROW, ROW... ON THE CHARLES! MassDEP staffers manned the rowboats during this spring's annual Run of the Charles boat race. MassDEP finished in second place in the Government category (just behind the EPA), and finished in 12th place overall, in a time of four hours and 13 minutes.

46 WATER SUPPLIERS HONORED BY MassDEP: MassDEP Acting Commissioner Arleen O'Donnell was the guest speaker at the Massachusetts Public Drinking Water Awards ceremony in May, when 46 public water systems were honored for their outstanding performance as part of National Drinking Water Week. Commissioner O'Donnell awarded the winning systems with a certificate of outstanding performance and achievement and a Governor's Award. "There are 1,638 public water systems in the Commonwealth that provide approximately 500 million gallons per day of safe, potable drinking water to our citizens," O'Donnell said at the ceremony, held at UMass-Amherst. "Today we recognize those water suppliers who have gone above and beyond meeting the minimum regulatory requirements for compliance." For more information and a list of winners, go to:

<http://www.mass.gov/dep/public/press/0507drin.htm>

AMERICA'S BEST TASTING WATER: MassDEP offers congratulations to The Three Rivers Fire District in Palmer for earning the award of "America's Best Tasting Water" earlier this year from the National Rural Water Association (NRWA). Three Rivers was one of five finalists, and earned the title during the taste test held on Capitol Hill during NRWA's Annual Rally in Washington, D.C. The 925 Three Rivers district connections get their water from two groundwater wells. The district was first established in 1912.



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